are acknowledged experts. It seems a pity however, that they did not choose to invite equally expert physicians to write the appropriate chapters.

NF LAWTON

Decision making in Child Neurology By David W Dunn, Leon G Epstein. (Pp 217; £41.50.) Oxford: Blackwell Scientific Publications, 1987.

This is not a textbook of child neurology—it has no detailed systematic accounts of childhood neurological disease (though there are some very useful brief summaries), and few illustrations. It does, however, address itself to an important practical need, where a textbook does not always help: how to set about making a diagnosis when a child presents with a particular neurological problem. The authors take 102 presenting problems, such as progressive retardation, possible meningitis, and head trauma, and deal with each in two large pages. On the right hand page is an algorithm, a set of branching paths, with instructions on which path to follow according to the examination findings or the results of investigations. On the facing pages are concise explanatory notes.

This is the way we like to think we make diagnoses or decisions, in a series of logical steps, each depending on asking the appropriate question, and knowing what to do next for each of the possible answers. Does it work? It depends on there being clear-cut answers to the questions, which allow an unequivocal decision to reject one path and proceed down another. In the real world of child neurology, the diagnostic process is often not so black and white. For example, the algorithm for the child with a large head does not allow the diagnosis of familial macrocephaly to be made if the head has been growing abnormally fast, yet the rate of head growth in this condition may be just as fast in the first year of life as in the child with progressive hydrocephalus. There is some danger in closing off diagnostic pathways, particularly at an early stage in decision making.

"Two roads diverged in a wood and I —
I took the one less traveled by
And that has made all the difference".
Sometimes Robert Frost's road "less traveled by" may be the only one which will lead to a correct answer.

Some problems are just too complex to be dealt with in the double-page format. For example "progressive retardation" has an additional four pages of very useful tables

which list the possible diseases causing particular clinical features. Furthermore, some algorithms can only be used when a first diagnostic step has been achieved, for example "Reye's syndrome" and "optic pathway tumour".

Despite these limitations (which the authors frankly acknowledge) this is a useful, interesting and above all enjoyable book. It has been carefully thought out and attractively presented. It is instructive to compare the algorithms with the way we actually do proceed in a child with a neurological problem. We can certainly clarify our thinking if we try to make our own algorithms for tackling particular problems. If computers are ever going to help us in clinical decision-making, the first requirement will be to devise algorithms like these and to test their reliability in clinical practice.

ROGER J ROBINSON

Visceral Sensation. (Progress in Brain Research Vol 67). Edited by F Cervero, JFB Morrison. (Pp 336; \$102.00.) Amsterdam Elsevier Science Publishers, 1986.

Despite the clinical importance of visceral pain, the subject has received scant attention, compared with somatic pain, until recent years. This book reflects the renewed interest in peripheral and central mechanisms and neurochemistry of visceral sensation. A recurring question through the various chapters in this volume is whether visceral sensory receptors subserve normal visceral sensation and visceral nociception. Most evidence points to an absence of specific nociceptors.

The clinical phenomena of visceral sensation and pain are described by Procacci *et al* in one of the three opening review chapters. The characteristics of visceral pain and referred pain are discussed, drawing on observations in patients and some human experiments. All the other 17 chapters, are based on animal neurophysiology. In the other two review chapters in section one, Paintal considers mechanisms of respiratory, bladder and rectal sensations, together with thirst and hunger. Iggo discusses C fibre afferent properties in detail.

The second section of the book contains chapters on afferent systems from the heart, lungs, gastrointestinal tract and pelvic organs and chapters on neurochemistry and pharmacological aspects of visceral sensory

receptors. Particularly noteworthy is the long chapter by Janig and Morrison which examines some functional properties of spinal visceral afferents particularly with respect to pain. The facts which emerge from their review are that the density of spinal innervation is very low, visceral afferents comprising only 1.5 to 2.5% of the total spinal input; there is very poor spatial resolution of the afferent input due to input over many spinal cord segments, and the responses of afferents are to a large degree dependent upon the strength of the stimulus. Janig and Morrison found no specific population of visceral nociceptors, again suggesting that pain is related to the intensity of the afferent discharge.

The third section deals with central nervous system mechanisms of visceral sensation, containing eight chapters on spinal cord and brain stem integration and reflex control of some outputs. There is an excellent chapter by McMahon on sensory-motor integration in urinary bladder function, in which the complexity of neural coordination necessary for the reflex act of micturition is demonstrated. This and other chapters in this section are not light reading, nor does their content have immediate impact for the clinician. They demonstrate how little we understand of our vegetative functions.

It is clear from the mass of data in this book that current knowledge still does not permit more than speculation about the mechanisms of many visceral sensations and pains in man and that the information cannot as yet be put to clinical use.

This book will appeal mainly to experimental neurophysiologists, but the first section is readily accessible to the clinician. Physicians and surgeons interested in the various viscera discussed will perhaps find more of interest in their particular visceral field in the remainder of the book than will the clinical neurologist.

JW SCADDIN